CLAIMS

1. An allocating device for dynamically allocating bandwidth, said allocating device comprising:

a plurality of personality modules, each of said plurality of personality modules having an independent bandwidth requirement;

an allocation module connected to said plurality of personality modules by a plurality of transmission channels, said allocating module assigns incremental bandwidths to said plurality of personality modules based upon the bandwidth requirement of said each of said plurality of personality modules; and

a microprocessor connected to said allocation module by a transmission line for programming said allocation module to assign an appropriate amount of bandwidth to said plurality of personality modules.

2. The device of claim 1, further comprising a controller connected to said microprocessor and said plurality of personality modules by a data line, wherein said controller obtains information from personality modules contained in the slots to determine how much bandwidth to assign to each personality module for transmitting data on a personality module.

3. The device of claim 2, wherein said plurality of personality modules is assigned incremental bandwidths with 27 Mb/s granularity.

4. The device of claim 3, further comprising a multiplexer connected to said allocation device by a second data line.

5. The device of claim 4, wherein said multiplexer obtains a payload from said each of said plurality of personality modules and combines said payload for transmission over a single transmission channel.

6. The device of claim 5, wherein said allocation module further

comprises an interface circuit, said interface circuit comprises a set of input lines, a set of output lines and a set of dedicated bits and wherein said interface circuit controls the direction of said payload that flows between said multiplexer and said plurality of personality modules and determines which of said output lines to transmit said payload on.

7. The device of claim 6, wherein said set of input lines is an 88 bit wide bus.

8. The device of claim 7, wherein said set of input lines is an 88 bit wide bus.

9. The device of claim 8, wherein said set of dedicated bits carries said payload to and from said plurality of personality modules.

10. The device of claim 9, wherein said payload is high quality uncompressed video.

11. The device of claim 9, wherein said payload is high quality uncompressed audio.

12. The device of claim 9, wherein said payload is modulated IF carrier.

13. The device of claim 9, wherein said plurality of personality modules is selected from a group consisting of a transmit only module, a receive only module and a transceiver module.

14. The device of claim 13, wherein a front panel of said allocating device comprises a connector for connecting an external device to said allocation device.

15. The device of claim 14, wherein said external device is a monitor for

displaying video data.

16.   A system for dynamically allocating bandwidth, said system
        comprising:
            a plurality of allocation devices connected together by a plurality
of transmission lines;
            each of said plurality of allocation devices comprising:
                a plurality of personality modules, each of said plurality of
            personality modules having an independent bandwidth
            requirement;
                an allocation module connected to said plurality of
personality modules by a plurality of transmission channels, said
allocating module assigns incremental bandwidths to said   plurality of
personality modules based upon the bandwidth   requirement of
said each of said plurality of personality   modules; and
                a microprocessor connected to said allocation module by
            a transmission line for programming said allocation module to
            assign an appropriate amount of bandwidth to said plurality of
            personality modules.

17.   The system of claim 16, wherein said each of said plurality of allocation
devices further comprises a controller connected to said microprocessor and
said plurality of personality modules by a data line, wherein said controller
obtains information from personality modules contained in the slots to
determine how much bandwidth to assign to each personality module for
transmitting data on a personality module.

18.   The system of claim 17, wherein said plurality of personality modules is
assigned incremental bandwidths with 27 Mb/s granularity.

19.   The system of claim 18, wherein said each of said plurality of allocation
devices further comprises a multiplexer connected to said allocation device by

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a second data line.

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20. The system of claim 19, wherein said multiplexer obtains a payload from said each of said plurality of personality modules and combines said payload for transmission over a single transmission channel.

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21. The system of claim 20, wherein said allocation module further comprises an interface circuit, said interface circuit comprises a set of input lines, a set of output lines and a set of dedicated bits and wherein said

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interface circuit controls the direction of said payload that flows between said multiplexer and said plurality of personality modules and determines which of

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said output lines to transmit said payload on.

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22. The system of claim 21, wherein said set of input lines is an 88 bit wide bus.

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23. The system of claim 22, wherein said set of output lines is an 88 bit wide bus.

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24. The system of claim 23, wherein said interface circuit further comprises a set of dedicated bits carries said payload to and from said plurality of

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personality modules.

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25. The system of claim 24, wherein said payload is high quality uncompressed video.

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26. The system of claim 25, wherein said payload is high quality uncompressed audio.

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27. The system of claim 26, wherein said payload is modulated IF carrier.

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28. The system of claim 27, wherein said plurality of personality modules is

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selected from a group consisting of a transmit only module, a receive only module and a transceiver module.

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29.   The system of claim 28, wherein a front panel of said each of said plurality of allocation devices comprises a connector for connecting an external device to said allocation device.

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30.   The system of claim 29, wherein said external device is a monitor for displaying video data.

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31.   The device of claim 30, wherein said plurality of allocation devices are connected together in a daisy chain configuration.

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32.   A method for dynamically allocating bandwidth, said method comprising the steps of:

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        entering payload into a graphical user interface of a system where it is received by a personality module;

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        checking the system to verify the existence of said payload;

        requesting bandwidth to transmit the payload from an allocation

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module which allocates only the bandwidth that is needed for transmission; and

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        assigning said payload to bandwidth for transmission and saving the bandwidth related bits into a database.

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33.   The method of claim 32, wherein said database is continually updated and keeps track.

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34.   The method of claim 33, wherein said slots are incremented with 27 Mb/s granularity.

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